

UNITED STATES PATENT AND TRADEMARK OFFICE

APR 2 9 2003

**GROUP 1700** 

PATENT APPLICATION

Docket No.: N.C. 82,621

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In the application of: Ringeisen et al.

Serial No.: 10/068,364 Filed: February 8, 2002

For: GENERATION OF BIOMATERIAL MICROARRAYS BY LASER TRANSFER

Examiner: Not yet assigned

Art Group Unit: 1762

April 16, 2002

Honorable Commissioner of Patents Washington, D.C. 20231

## INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicants wish to cite the documents identified on the attached form PTO-1449.

Copies of the cited documents, to the extent they are available, are enclosed for the Examiner's convenience. Since the documents are in the English language, a concise explanation of their relevance is not necessary.

By this submission, Applicants do not assert that a search of the prior art was made or that the patents and documents cited constitute all relevant prior art. The references cited constitute only that information now known to the Applicants which, in the reasonable opinion of the Applicants, is relevant to the claimed invention.

Applicants reserve the right to remove these references by way of a declaration under 37 C.F.R. § 1.131 or 1.132.

The Examiner is requested to consider the cited documents, and to return a copy of the initialed and signed PTO-1449 form.

## PATENT APPLICATION

Docket No.: N.C. 82,621

No fee is due for this information disclosure statement since is being filed before a first Office action on the merits. However, please charge any additional fee due or credit any overpayment to Deposit Account No. 50-0281.

Respectfully submitted,

John J. Karasek
Reg. No. 36, 182
Phone No. 202-404-1552
Associate Counsel (Patents)
Naval Research Laboratory

4555 Overlook Ave, SW Washington, DC 20375-5325

Prepared by: Joseph T. Grunkemeyer Reg. No. 46,746 Phone No. 202-404-1556

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PTO/SB/08A (08-00)

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number	10/068,364	$\exists$			
Filing Date	February 08,2002				
First Named Inventor	Ringeisen	٦			
Group Art Unit	1762	٦			
Examiner Name	unknown	7			
Attorney Docket Number	NC 82,621	フ			

				U.S. PATENT DOCU	IMENTS	
Examiner Initials	Cile No.1	U.S. Palent Number	Document Kind Code <sup>2</sup> (it known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	Α	3,745,586		Braudy	07/10/1973	
	В	3,978,247		Braudy et al.	08/31/1976	(A)
	C	4,064,205		Landsman	12/20/1977	900
	D.	4,245,003		Oransky et al.	01/13/1981	Q
	F	4,702,958		Itoh et al.	10/27/1987	10 S
	F	4,752,455		Mayer	06/21/1998	<b>D</b> . C
	G	4,895,735		Cook	01/23/1990	
	H	4,970,196		Kim et al.	11/13/1990	<i>a</i> . C.
	Т	4,987,006		Williams et al.	01/22/1991	ARR CA
	J	5,156,938		Foley et al.	10/20/1992	
	K	5,171,650		Ellis et al.	12/15/1992	0 02
	I.	5,173,441		Yu et al.	12/22/1992	7. 102
	М	5,256,506		Ellis et al.	10/26/1993	70
	Ν	5,292,559		Joyce, Jr. et al.	03/08/1994	00
	0	5,492,861		Opower	02/20/1996	
	P	5,567,336		Tatah	10/22/1996	
	0	5,725,706		Thoma et al.	03/10/1998	
	Ř	5,725,914		Opower	03/10/1998	
	S	5,736,464		Opower	04/07/1998	
	Т	6,025,036		McGill et al.	02/15/2000	

	FOREIGN PATENT DOCUMENTS								
Examiner Inillals	Cite No.1	Foreign Patent Document  Kind Code <sup>3</sup> Office <sup>3</sup> Number <sup>4</sup> (// known)		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Linas, Where Relevant Passages or Relevant Figures Appear	Te		
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Substitute for form 1449A/PTO INFORMATION DISCLOSURE			C mplete if Known			
			Application Number	10/068,364 February 08,2002		
			Filing Date			
STATEMENT BY APPLICANT		First Named Inventor	Ringeisen			
	•		Group Art Unit	1762		
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Sheet 3	of 3		Attorney Docket Number	NC 82,621		

	U.S. PATENT DOCUMENTS								
Examiner Initials	Cite No.1	U.S. Patent Documen  Kind Coo  Number  (if known	of Cited Document	MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear				
	v	6,177,151	Chrisey et al.	01/23/2001					
	W	6,056,907	Everett et al.	05/02/2000	<u>Q</u>				
		5,308,737	Bills et al.	05/03/1994	755				
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Group Art Unit	1762				
Examiner Name	unknown				
Attorney Docket Number	82,621				

	OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>			
	Y	Tolbert et al, "Laser Ablation Transfer Imaging Using Picosecond Optical Pulses: Ultra-High Speed, Lower Threshold and High Resolution" Journal of Imaging Science and Technology, Vol. 37 No. 5 Sept./Oct. 1993 pp. 485-489				
		Adrian et al, "A Study of the Mechanism of Metal Deposition by the Laser-Induced Forward Transfer Process" J. Vac. Sci. Tecchnol. B5 (5), Sept./Oct. 1987 pp. 1490-1494				
		Bohandy et al, "Metal Deposition from a Supported Metal Film Using an Excimer Laser, J. Appl. Phys. 60 (4) 15 August 1986 pp. 1538-1539				
	BB	von Gutfeld, R., Enhancing Ribbon Transfer Using Laser Printing, IBM Technical Disclosure Bulletin, Vol. 17, No. 6, Nov., 1974				
		McGill, et al., " Choosing Polymer Coatings for Chemical Sensors", CHEMTECH Journal, American Chemical Society, Vol. 24, No. 9, Sept. 1994 pp. 27-37				
/ED		Ringeisen et al, "Generation of Mesoscopic Patterns of Viable Escherichia Coli by Ambient Laser Transfer", Biomaterials, Vol 23, 2002 pp. 161-166				
		Wu et al, "The Deposition, Structure, Pattern Deposition, and Activity of Biomaterial Thin-Films by Matrix-Assisted Pulsed-Laser Evaporation (MAPLE) and MAPLE Direct Write", Thin Solid Films, Vol. 398-399, 2002 pp. 607-614				
		Chrisey et al, "Matrix Assisted Pulsed Laser Evaporation Direct Write", Divisional Application, 09/671,166, Filed Sept. 28, 2000, pp. 1-12				
		Ringeisen et al, "Generation of Viable Cell and Active Biomaterial Patterns By Laser Transfer", Provisional Application, 60/269,384 Filed Feb. 20, 2001, pp. 1-54				
-						
		Ringeisen et al, "Generation of Viable Cell and Active Biomaterial Patterns By Laser Transfer", Non-Provisional Application, 10/068,315 Filed Feb. 08, 2002 pp.1-37				
		Meneghini et al, "Transfer Printing Medium", PCT International Application, PCT/US94/11345, Filed Oct. 06, 1994, pp. 1-22	S			

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**Application Number** 10/068,364 INFORMATION DISCLOSURE February 08, 2002 Filing Date First Named Inventor Ringeisen STATEMENT BY APPLICANT 1762 Group Art Unit unknown (use as many sheets as necessary) Examiner Name of 4 Attorney Docket Number 82,621

		OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the	T
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	IJ	Young et al, "Jetting Behavior in the Laser Forward Transfer of Rheological Fluids", Provisional Application, 60/327,733 Filed Oct 10, 2001, pp. 1-46	
	KK.	Auyeung et al, "Laser Forward Transfer of Rheological Systems", Provisional Application, 60/290,400 Filed May 05, 2001, 1-17	$\perp$
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